

Women and Ischemia Syndrome Evaluation (WISE) Diagnosis and Pathophysiology of Ischemic Heart Disease Workshop

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Session 4

1. Topic and Author

HRT in acute coronary syndromes.

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2. Where we stand in 2002. Overview/rationale for inclusion of topic.

Estrogen has vasodilator and fibrinolytic actions that have prompted interest in its potential for benefit in reducing demand ischemia and acute coronary syndromes. However, the prothrombotic effect is also of concern. Randomized studies evaluating the effect of HRT in reducing coronary events in postmenopausal women have shown no angiographic reduction in coronary atherosclerosis, and have shown an increase in acute coronary syndromes within the first year after initiating of HRT. Initiation of hormone therapy within 1 year of an acute myocardial infarction (Alexander et al, JACC 2001) has been associated with an increase in unstable angina events. A randomized clinical trial compared the effect of conjugated equine estrogen (E), E + medroxyprogesterone (E+P), or placebo, on recurrent ischemia in postmenopausal women with unstable angina (Schulman et al. JACC 2002). This study showed no difference in recurrent ischemia early following initiating of drug, and no difference in in-hospital or 6 month rates of nonfatal MI or death, among the three groups. This study was underpowered to detect modest rates of difference. In a retrospective cohort study, women reporting current use of HRT have lower in-hospital mortality following admission with acute myocardial infarction than postmenopausal women not receiving HRT, even after adjusting for age and other therapies. (Shlipak et al, Circulation 2001).

3. Current challenges and the most important issues for future research

1. Do these studies provide any insight into the mechanism by which initiating hormone therapy results in increased coronary risk?
2. Should HRT be discontinued in all women admitted for acute coronary syndromes?
3. Is estrogen alone different from estrogen and progesterone therapy?
4. Are there interactions between the effects of hormones and other treatments given in acute coronary syndromes that may explain these findings?
5. Can lessons from the research in HRT and cardiovascular disease be applied to other areas of research?

4. Current challenges in the areas of communicating messages to health care community, patients and the public

The goal is to inform rather than to frighten. Providing information using absolute risk rather than relative risk.

5. Translating new findings to improved diagnosis and treatment/saving lives.

1. Evaluation as to whether the guidelines for use of HRT are being followed.

6. References.

1. Schulman SP, Thiemann DR, Ouyang P, Chandra NC, Schulman DS, Reis SE, Terrin M, Forman S, Piva de Albuquerque C, Bahr RD, Townsend SN, Cosgriff R, Gerstenblith G. Effects of acute hormone therapy on recurrent ischemia in postmenopausal women with unstable angina. J Am Coll Cardiol 2002;39:231-7
2. Alexander KP, Newby LK, Hellkamp AS, Harrington RA, Peterson ED, Kopecky S, Langer A, O'Gara P, O'Connor CM, Daly RN, Califf RM, Khan S, Fuster V. Initiation of hormone replacement therapy after acute myocardial infarction is associated with more cardiac events during follow-up. J Am Coll Cardiol 2001;38:1-7

3. Shlipak MG, Angeja BG, Go AS, Frederick PD, Canto JG, Grady D for the NRMI-3 investigators. Hormone therapy and in-hospital survival after myocardial infarction in postmenopausal women. *Circulation* 2001;104:2300-2304